

A NEW SPECIES OF *HOMOCHAETA* (OLIGOCHAETA: NAIDIDAE) FROM THE WEST COAST OF CANADA

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Abstract.—*Homochaeta raptisae* n. sp. is described from the lower Fraser River, British Columbia. The new species represents the first confirmation of the genus *Homochaeta* in North America.

The genus *Homochaeta* is distinguishable from other naidid genera by the fact that its dorsal setae start from segment II and hair setae are absent. The genus presently contains two recognized species identified from Eurasia and a third species, *H. lactea*, described from a single specimen collected in South America (Cernosvitov, 1937) and considered to be *species incerta sedis* (Brinkhurst and Jamieson, 1971). This paper describes a new species of *Homochaeta* from the North American west coast, *Homochaeta raptisae*.

Materials and Methods

Specimens of *Homochaeta raptisae* were identified from oligochaetes collected at several stations in the Tilbury Slough area of the lower Fraser River, B.C. (Chapman, 1980) during a baseline study by staff at the Habitat Protection Division of the Department of Fisheries and Oceans Canada (principal investigator, Mr. M. Nassichuk). Preserved worms were stained in paracarmine, and mounted whole in Canada balsam. The holotype and paratypes are deposited at the British Museum (Natural History) (BMNH). Additional material is deposited at the United States National Museum of Natural History (NMNH), and the National Museums of Canada (NMCIC).

Homochaeta raptisae, new species

Fig. 1

Material.—Holotype: BMNH 1980.47.1, whole mounted specimen. Paratypes: BMNH 1980.47.2-3, 2 specimens in alcohol. NMCIC 1980-1527, 2 specimens in alcohol; 1980-1528, whole mounted specimen. NMNH 062010, 2 specimens in alcohol; 062011, whole mounted specimen. Additional material: In the collection of P. M. Chapman, 30 specimens from various locations in the lower Fraser River, B.C.

Type-locality.—Lower Fraser River, B.C., Canada; subtidal silty sediment; 49°8.9'N, 122°59.7'W, collected 26 April 1977.

Etymology.—Named for my wife, Stavroula Raptis.

Description.—No pigment or eyes. Up to 15 segments, length (preserved) 0.5-1.0 mm. Prostomium elongate, triangular and upturned. All setae of

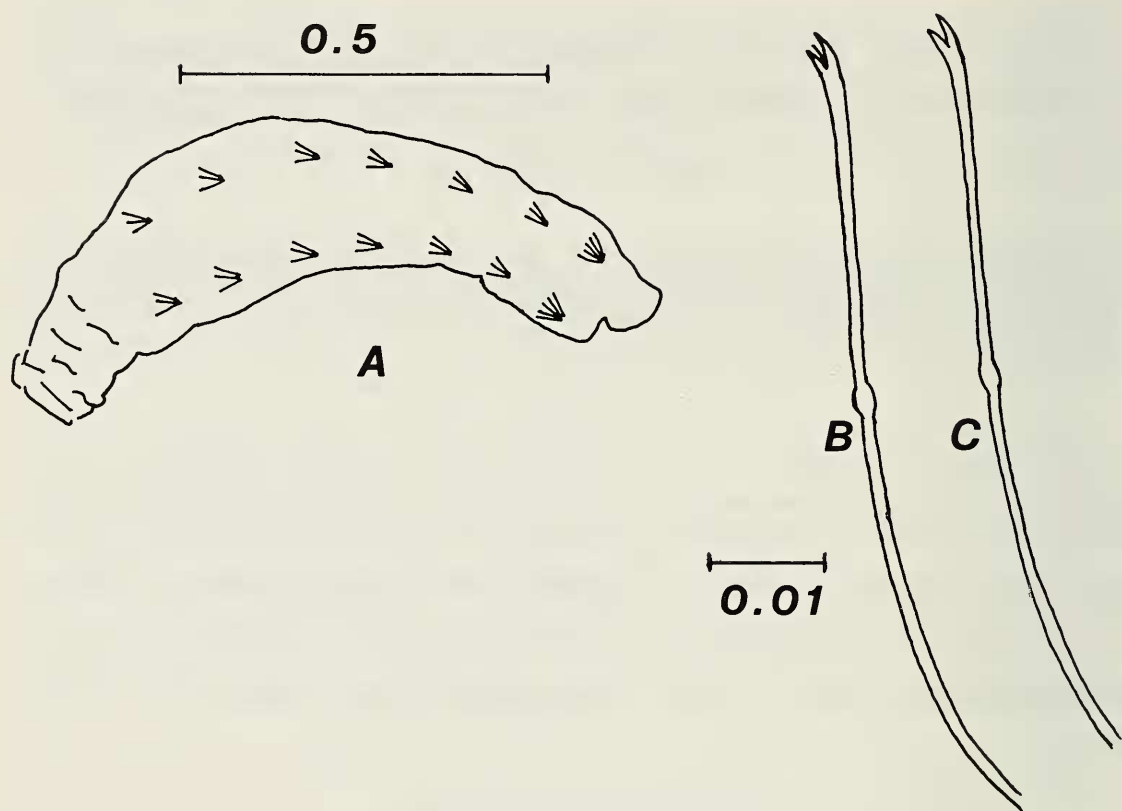


Fig. 1. *Homochaeta raptisae*: A, Outline of whole-mounted worm; B, Dorsal anterior setae; C, Ventral setae. All lengths in mm.

same shape, teeth of equal length, upper tooth thinner than lower, nodulus distal; dorsal anterior teeth with a single intermediate pectination; 5 setae per bundle in II, in other segments 3. Pharynx in II–III, stomach in V. Chloragogen from V. Coelomocytes absent. Evidence of budding.

Discussion

The genus *Homochaeta* is so distinctive, with bifid dorsals starting from II and lacking hair setae, that it cannot be confused with other naidids. With the discovery of *H. Raptisae* n. sp., the genus is now expanded to include four species, with the Eurasian forms (*H. naidina* and *H. setosa*) geographically separated from the South American species (*H. lactea*) and the present new species. A report of *H. naidina* from Virginia (Falls 1974) is unconfirmed, as voucher specimens were lost (Hiltunen and Klemm 1980).

H. raptisae can be distinguished from the other three species in the genus based on size, prostomial shape, and setal shape and number. Examination of the unique holotype of *H. lactea* (sent to the author courtesy of Mr. R. W. Sims of the British Museum) confirmed that *H. raptisae* is a new species. The other two species in the genus are sufficiently distinct that an examination of type-specimens was not necessary.

All specimens of *H. raptisae* examined contained large numbers of diatoms in their guts, but very little sediment, which suggests that they were feeding selectively on periphyton. All specimens were immature, a not unusual observation among the Naididae, which reproduce asexually by budding. Thus a description of sexually mature specimens must await the collection of further material.

H. raptisae was collected at the type-locality in numbers varying from $<500\text{ m}^{-2}$ in winter and summer to $>10,000\text{ m}^{-2}$ in spring. This seasonal abundance pattern, typical of many naidids, will be discussed elsewhere and is documented by Chapman (1980). The relatively large numbers of *H. raptisae* observed in the Fraser River suggest that this species will be identified from other areas in future. Its absence from previous taxonomic records may be due partly to the fact that inexperienced taxonomists could mistake the species for an immature tubificid, since its dorsals start on II. However, it is more probable that, due to its small size coupled with the common use of 0.5 mm sieves in benthic collections, previous workers have failed to collect or sort *H. raptisae* from sites where it might be abundant. The worms described in the present study were sorted using a 0.250 mm sieve; however, oligochaete collections made in 1972 and 1973 from the type-area (Westwater station 6—Northcote et al., 1976), sorted with a 0.5 mm sieve and examined by the author, did not include *H. raptisae*. This omission serves to emphasize the importance of sieve size in base-line benthic collections.

Acknowledgments

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